



GETTLER-RYAN INC.

TRANSMITTAL

October 4, 2001
G-R #180021

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Doug Lee
Gettler-Ryan Inc.
Dublin, California

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Tosco (Unocal) Service Station
#6419
6401 Dublin Boulevard
Dublin, California**

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	October 2, 2001	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of August 24, 2001

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by *October 18, 2001*, this report will be distributed to the following:

cc: Ms. Eva Chu, Alameda County Health Care Services, 1131 Harbor Bay Pkwy., Alameda, CA 94502

Enclosure

trans/6419.dbd



GETTLER-RYAN INC.

October 2, 2001
G-R Job #180021

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Second Semi-Annual Event of August 24, 2001
Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #6419
6401 Dublin Boulevard
Dublin, California

Dear Mr. De Witt:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are summarized in Table 3. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Tables 1, 2 and 4. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

Deanna L. Harding
- For -

Deanna L. Harding
Project Coordinator

Douglas J. Lee

Douglas J. Lee
Senior Geologist, R.G. No. 6882

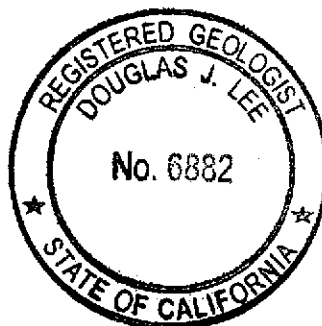
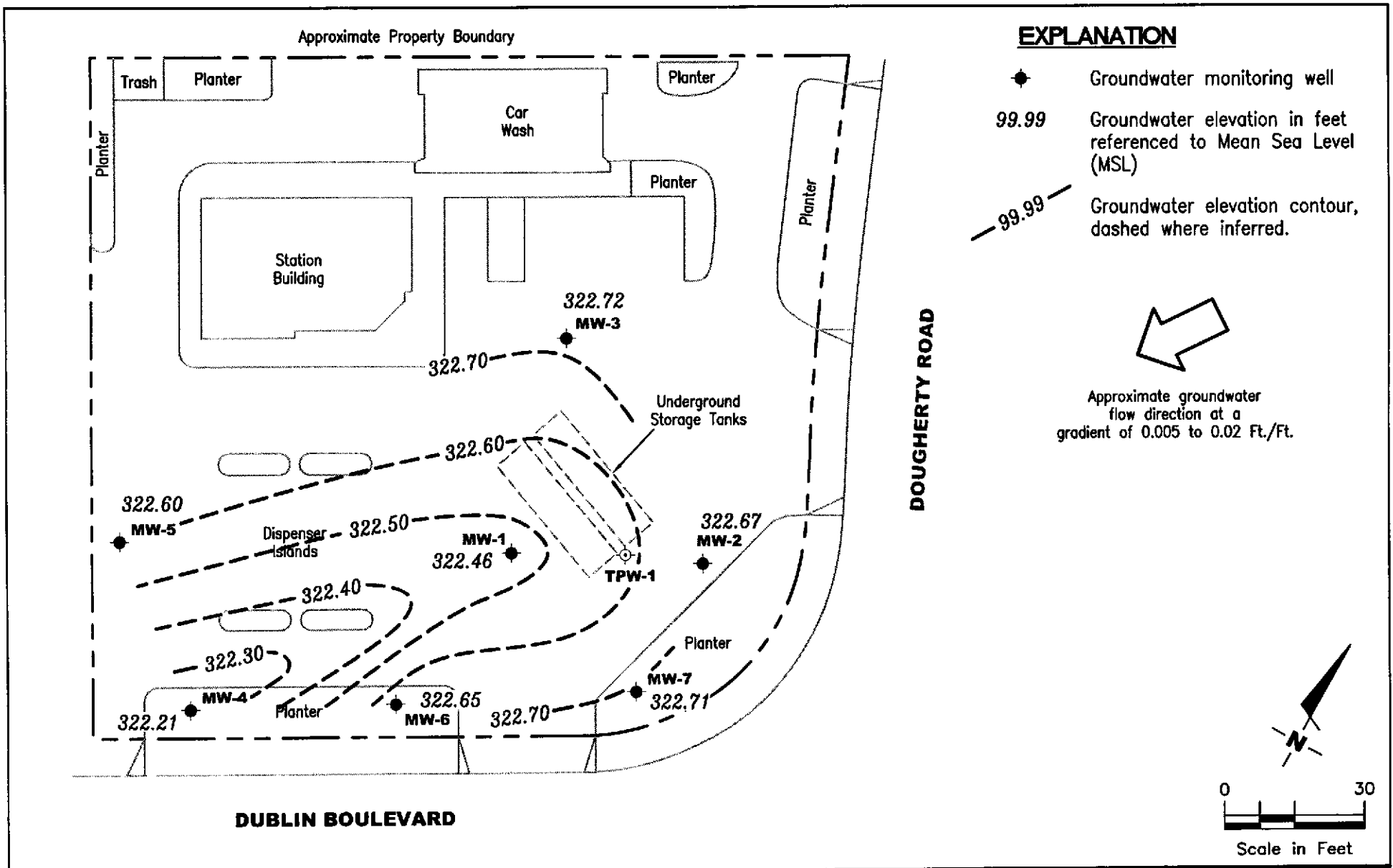


Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Table 3: Dissolved Oxygen Concentrations
Table 4: Groundwater Analytical Results - Metals
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

6419.qml

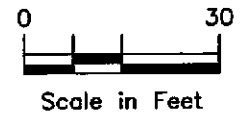


EXPLANATION

- Groundwater monitoring well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 --- Groundwater elevation contour, dashed where inferred.



Approximate groundwater flow direction at a gradient of 0.005 to 0.02 Ft./Ft.



GETTLER - RYAN INC.
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POTENTIOMETRIC MAP
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

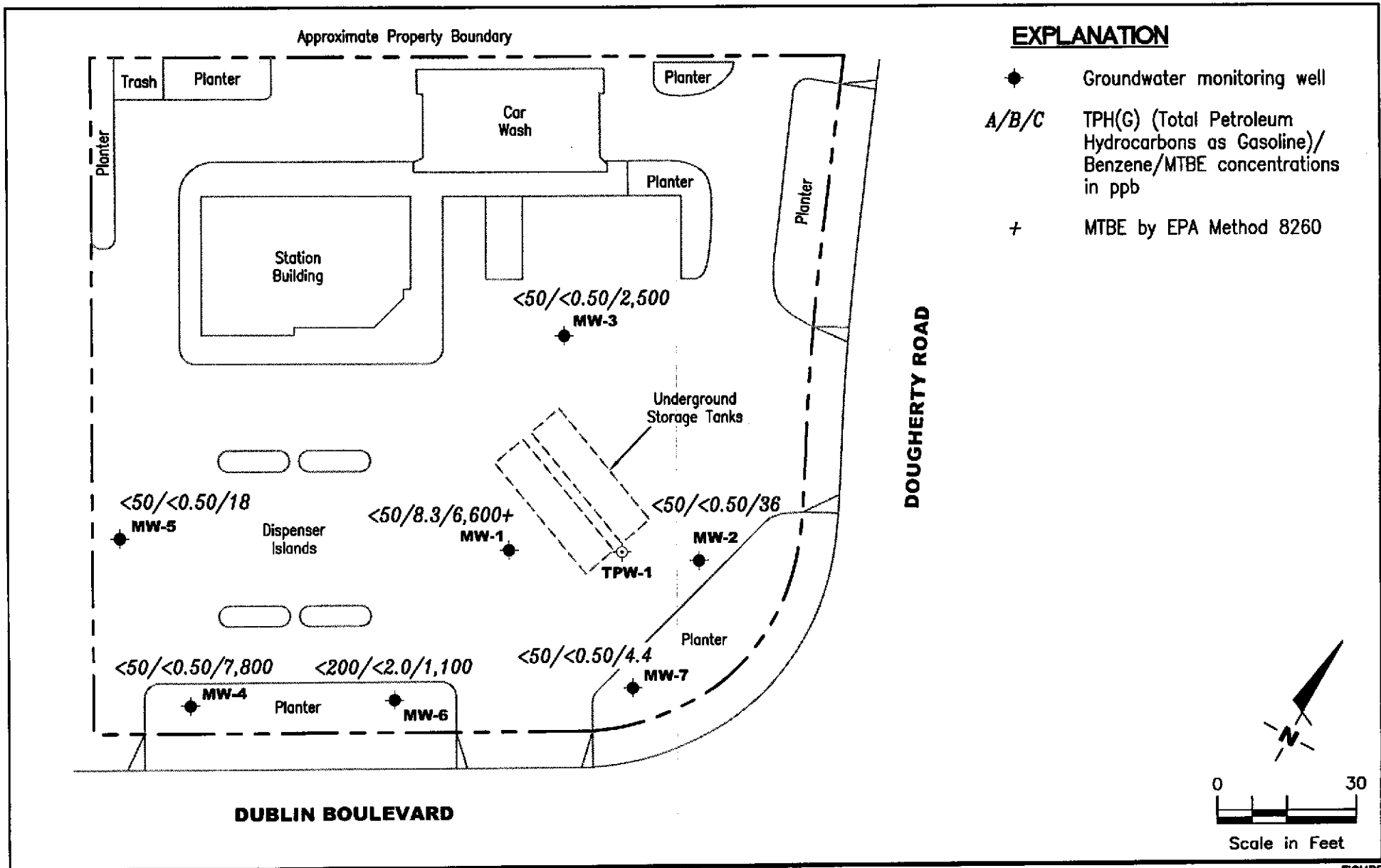
FIGURE
1

PROJECT NUMBER
 180021

REVIEWED BY

DATE
 August 24, 2001

REVISED DATE



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 Dublin, CA 94568 (925) 551-7555

CONCENTRATION MAP
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

FIGURE
2

PROJECT NUMBER 180021	REVIEWED BY	DATE August 24, 2001	REVISED DATE
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Table 1
Groundwater Monitoring Data and Analytical Results
Tosco (Unocal) Service Station #6419
6401 Dublin Boulevard
Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1											
330.45	03/14/94	7.27	4.0-19.0	323.18	810 ¹	1,800 ²	17	ND	ND	ND	--
	08/25/94	8.57		321.88	910 ³	9,200 ²	48	ND	540	ND	--
	09/30/94	8.78		321.67	--	--	--	--	--	--	--
	10/20/94	8.98		321.47	--	--	--	--	--	--	--
	11/18/94	7.69		322.76	910 ³	5,100	33	ND	560	38	--
	12/20/94	7.58		322.87	--	--	--	--	--	--	--
	01/17/95	6.03		324.42	--	--	--	--	--	--	--
	02/15/95	6.29		324.16	660 ¹	3,300	13	ND	180	5.2	--
	03/13/95	5.64		324.81	--	--	--	--	--	--	--
	04/06/95	5.62		324.83	--	--	--	--	--	--	--
	05/17/95	6.26		324.19	200 ³	130	0.75	ND	1.5	ND	--
	06/15/95	6.75		323.70	--	--	--	--	--	--	--
	08/25/95	7.91		322.54	--	490	9.1	ND	21	2.0	-- ⁵
	11/28/95	9.03		321.42	--	1,400	18	3.0	98	3.6	-- ⁵
	02/26/96	5.77		324.68	--	560	9.3	ND	22	ND	1,300
	08/23/96	7.78		322.67	--	ND	ND	ND	ND	ND	640
330.23	02/17/97	5.73		324.50	--	120 ⁴	1.0	0.95	ND	ND	280
	08/18/97	7.38		322.85	--	ND	ND	ND	ND	ND	100
	02/02/98 ⁶	5.10		325.13	--	ND ⁷	130	ND ⁷	ND ⁷	ND ⁷	32,000
	08/24/98	6.73		323.50	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	26,000/24,000 ⁸
	02/10/99	5.46		324.77	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	84,000/100,000 ⁸
	04/12/99	6.38		323.85	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	140,000/120,000 ⁸
330.21	05/21/99	5.95		324.26	--	--	--	--	--	--	--
	08/02/99	6.75		323.46	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	91,000/140,000 ¹⁰
	02/11/00	6.44		323.77	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	38,000/39,000 ⁸
330.18	07/26/00 ¹³	7.08		323.10	--	146 ¹²	ND	ND	ND	ND	30,900/42,800 ¹⁰
	02/02/01	6.99		323.19	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	5,380/6,430 ⁸
	08/24/01	7.72		322.46	--	<50	8.3	<0.50	<0.50	<0.50	10,000/6,600 ⁸

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2											
330.40	03/14/94	7.23	4.0-20.0	323.17	--	ND	ND	2.8	1.1	8.0	--
	08/25/94	8.41		321.99	--	ND	ND	ND	ND	ND	--
	09/30/94	8.73		321.67	--	--	--	--	--	--	--
	10/20/94	8.92		321.48	--	--	--	--	--	--	--
	11/18/94	7.67		322.73	--	ND	ND	ND	ND	ND	--
	12/20/94	7.48		322.92	--	--	--	--	--	--	--
	01/17/95	6.00		324.40	--	--	--	--	--	--	--
	02/15/95	6.16		324.24	--	ND	ND	ND	ND	ND	--
	03/13/95	5.59		324.81	--	--	--	--	--	--	--
	04/06/95	5.51		324.89	--	--	--	--	--	--	--
	05/17/95	6.15		324.25	--	ND	ND	ND	ND	ND	--
	06/15/95	6.61		323.79	--	--	--	--	--	--	--
	08/25/95	7.45		322.95	--	ND	ND	ND	ND	ND	--
	11/28/95	8.85		321.55	--	ND	ND	ND	ND	ND	--
	02/26/96	5.49		324.91	--	ND	ND	ND	ND	ND	--
	08/23/96	7.44		322.96	SAMPLED ANNUALLY		--	--	--	--	--
330.27	02/17/97	5.64		324.63	--	ND	ND	ND	ND	ND	ND
	08/18/97	7.40		322.87	--	--	--	--	--	--	--
	02/02/98	5.09		325.18	--	ND	ND	ND	ND	ND	62
	08/24/98	6.70		323.57	--	--	--	--	--	--	--
	02/10/99	5.56		324.71	--	ND	ND	ND	ND	ND	130
330.30	05/21/99	5.98		324.32	--	--	--	--	--	--	--
	08/02/99	6.72		323.58	--	ND	ND	ND	ND	ND	120
	02/11/00	6.43		323.87	--	ND	ND	ND	ND	ND	39
330.24	07/26/00 ¹³	7.03		323.21	--	ND	ND	ND	ND	ND	89.9
	02/02/01	6.81		323.43	--	ND	ND	ND	ND	ND	20.1
	08/24/01	7.57		322.67	--	<50	<0.50	<0.50	<0.50	<0.50	36

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D (pph)	TPH-G (pph)	B (pph)	T (pph)	E (pph)	X (pph)	MTBE (pph)
MW-3											
331.11	03/14/94	7.93	4.0-20.0	323.18	--	150 ⁴	ND	ND	ND	ND	--
	08/25/94	9.20		321.91	--	130 ⁴	ND	ND	ND	ND	--
	09/30/94	9.43		321.68	--	--	--	--	--	--	--
	10/20/94	9.64		321.47	--	--	--	--	--	--	--
	11/18/94	8.39		322.72	--	130 ⁴	ND	ND	ND	ND	--
	12/20/94	8.20		322.91	--	--	--	--	--	--	--
	01/17/95	6.72		324.39	--	--	--	--	--	--	--
	02/15/95	6.93		324.18	--	130 ⁴	ND	ND	ND	ND	--
	03/13/95	6.30		324.81	--	--	--	--	--	--	--
	04/06/95	8.20		322.91	--	--	--	--	--	--	--
	05/17/95	6.88		324.23	--	99 ⁴	ND	ND	ND	ND	--
	06/15/95	7.35		323.76	--	--	--	--	--	--	--
	08/25/95	8.20		322.91	--	ND	ND	ND	ND	ND	-- ⁵
	11/28/95	9.52		321.59	--	ND	ND	ND	ND	ND	--
	02/26/96	6.25		324.86	--	ND	ND	ND	ND	ND	-- ⁵
	08/23/96	7.98		323.13	SAMPLED ANNUALLY		--	--	--	--	--
330.68	02/17/97	6.07		324.61	--	ND	ND	ND	ND	ND	68
	08/18/97	7.82		322.86	--	--	--	--	--	--	--
	02/02/98	5.50		325.18	--	ND	ND	ND	ND	ND	100
	08/24/98	7.12		323.56	--	--	--	--	--	--	--
	02/10/99	5.80		324.88	--	ND	ND	ND	ND	ND	92
330.49	05/21/99	6.16		324.33	--	--	--	--	--	--	--
	08/02/99	6.95		323.54	--	ND	ND	ND	ND	ND	140
	02/11/00	6.71		-- ¹¹	--	ND	ND	ND	ND	ND	46
330.60	07/26/00 ¹³	7.35		323.25	--	ND	ND	ND	ND	ND	927
	02/02/01	7.17		323.43	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	2,240
	08/24/01	7.88		322.72	--	<50	<0.50	<0.50	<0.50	<0.50	2,500

Table I
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.I. (ft.bgs)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4											
330.36	05/21/99 ⁹	6.43	4.0-19.0	323.93	--	ND	ND	ND	ND	ND	960/910 ⁸
	08/02/99	7.34		323.02	--	ND	10	ND	13	11	ND
	02/11/00	6.92		323.44	--	ND	ND	ND	ND	ND	2,700
330.35	07/26/00 ¹³	7.68		322.67	--	ND	ND	ND	ND	ND	3,710
	02/02/01	7.40		322.95	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	5,340
	08/24/01	8.14		322.21	--	<50	<0.50	<0.50	<0.50	<0.50	7,800
MW-5											
330.20	05/21/99 ⁹	5.99	4.0-19.0	324.21	--	ND	ND	ND	ND	ND	32/33 ⁸
	08/02/99	6.83		323.37	--	ND	ND	ND	ND	ND	230
	02/11/00	6.34		323.86	--	ND	ND	ND	ND	ND	98
	07/26/00 ¹³	7.06		323.14	--	ND	ND	ND	ND	ND	25.9
	02/02/01	6.81		323.39	--	ND	ND	ND	ND	ND	18.0
	08/24/01	7.60		322.60	--	<50	<0.50	<0.50	<0.50	<0.50	18
MW-6											
330.49	05/21/99 ⁹	6.24	4.0-19.0	324.25	--	ND	ND	ND	ND	ND	2,200/2,300 ⁸
	08/02/99	7.10		323.39	--	ND	ND	ND	ND	ND	ND
	02/11/00	6.60		323.89	--	ND	ND	ND	ND	ND	2,500
	07/26/00 ¹³	7.31		323.18	--	ND	ND	ND	ND	ND	4,280
	02/02/01	7.02		323.47	--	ND ⁷	ND ⁷	ND ⁷	ND ⁷	ND ⁷	1,990
	08/24/01	7.84		322.65	--	<200	<2.0	<2.0	<2.0	<2.0	1,100

Table I
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID/ TOC*	DATE	DTW (ft.)	S.L. (ft.lgs)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-7											
330.43	05/21/99 ⁹	6.13	4.0-19.0	324.30	--	ND	ND	ND	ND	ND	22/22 ⁸
	08/02/99	6.92		323.51	--	ND	ND	ND	ND	ND	31
	02/11/00	6.50		323.93	--	ND	ND	ND	ND	ND	20
	07/26/00 ¹³	7.18		323.25	--	ND	ND	ND	ND	ND	17.9
	02/02/01	6.95		323.48	--	ND	ND	ND	ND	ND	ND
	08/24/01	7.72		322.71	--	<50	<0.50	<0.50	<0.50	<0.50	4.4
Trip Blank											
TB-LB	02/02/98	--	--	--	--	ND	ND	ND	ND	ND	ND
	08/24/98	--		--	--	ND	ND	ND	ND	ND	ND
	02/10/99	--		--	--	ND	ND	ND	ND	ND	ND
	04/12/99	--		--	--	ND	ND	ND	ND	ND	ND
	05/21/99	--		--	--	ND	ND	ND	ND	ND	ND
	08/02/99	--		--	--	ND	ND	ND	ND	ND	ND
	02/11/00	--		--	--	ND	ND	ND	ND	ND	ND
	07/26/00 ¹³	--		--	--	ND	ND	ND	ND	ND	ND
	02/02/01	--		--	--	ND	ND	ND	ND	ND	ND
	08/24/01	--		--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5

Table 1
Groundwater Monitoring Data and Analytical Results
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

EXPLANATIONS:

Groundwater monitoring data and laboratory results prior to February 2, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing	TPH-D = Total Petroleum Hydrocarbons as Diesel	(ppb) = Parts per billion
DTW = Depth to Water	TPH-G = Total Petroleum Hydrocarbons as Gasoline	ND = Not Detected
(ft.) = Feet	B = Benzene	-- = Not Measured/Not Analyzed
S.I. = Screen Interval	T = Toluene	
(ft.bgs) = Feet Below Ground Surface	E = Ethylbenzene	
GWE = Groundwater Elevation	X = Xylenes	
(msl) = Mean sea level	MTBE = Methyl tertiary butyl ether	

* TOC elevations have been surveyed relative to msl, per the benchmark on the northwest corner of Dougherty Road and Sierra Way, (Elevation = 331.728 feet, msl). These TOC elevations have been used prior to the February 17, 1997 monitoring event. TOC elevations have been resurveyed (after station rebuilding) relative to msl, per the Benchmark on the northwest corner of Dougherty Road and Sierra Way, (Elevation = 331.728 feet, msl). TOC elevations were surveyed on August 18, 2000. The benchmark for the survey was a chiseled square on top center of the concrete curb at the north curb return at the northwest corner of the intersection of Dougherty Road and Dublin Boulevard, (Benchmark Elevation = 330.60 ft., NGVD 1929).

- ¹ Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- ² Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ³ Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
- ⁴ Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- ⁵ Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- ⁶ Well appears to be obstructed at approximately 9 feet.
- ⁷ Detection limit raised. Refer to analytical reports.
- ⁸ MTBE by EPA Method 8260.
- ⁹ Ethanol, t-butanol (TBA), di-isopropyl ether (DIPE), ethyl t-butyl ether (ETBE), and t-amyl methyl ether (TAME) by EPA Method 8260 were all ND.
- ¹⁰ MTBE by EPA Method 8260, was analyzed past EPA recommended hold time.
- ¹¹ TOC has been damaged. Cannot accurately calculate GWE.
- ¹² Laboratory report indicates unidentified hydrocarbons C6-C12.
- ¹³ Laboratory report indicates insufficient preservative to reduce ample pH to less than 2. Sample was analyzed within 14 days, but beyond the seventh day recommended for Benzene, Toluene, Xylene and Ethylbenzene.

Table 2
Groundwater Analytical Results - Oxygenate Compounds
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	07/26/00	--	ND ¹	42,800	ND ¹	ND ¹	ND ¹	ND ¹	ND ¹
	02/02/01	--	--	6,430	--	--	--	--	--
	08/24/01	<25,000	<1,000	6,600	<100	<100	<100	<100	<100

EXPLANATIONS:

TBA = Tertiary butyl alcohol
 MTBE = Methyl tertiary butyl ether
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tertiary butyl ether
 TAME = Tertiary amyl methyl ether
 1,2-DCA = 1,2-Dichloroethane
 EDB = 1,2-Dibromoethane/Ethylene dibromide
 (ppb) = Parts per billion
 -- = Not Analyzed
 ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

¹ Detection limit raised. Refer to analytical reports.

Table 3
Dissolved Oxygen Concentrations
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
MW-1	02/15/95	--	4.30
	05/17/95	--	1.20
	08/25/95	--	2.71
	11/28/95	--	3.25
	02/26/96	5.23	1.41
	08/23/96	3.83	N/A
	02/17/97	0.82	0.78
	08/18/97	1.28	2.35
	05/16/01	1.54	--
	08/24/01	--	3.10
MW-2	02/15/95	--	1.90
	02/26/96	0.62	0.43
	08/23/96	2.04	N/A
	02/17/97	0.90	0.82
	08/18/97	1.16	--
	05/16/01	1.47	--
	08/24/01	--	2.60
MW-3	02/15/95	--	2.60
	05/17/95	--	1.13
	08/25/95	--	1.86
	11/28/95	--	6.81
	02/26/96	16.83	1.11
	08/23/96	3.29	N/A
	02/17/97	0.80	0.80
	08/18/97	1.43	--
	05/16/01	1.65	--
08/24/01	--	2.60	
MW-4	08/24/01	--	2.30
MW-5	08/24/01	--	2.10
MW-6	08/24/01	--	2.70

Table 3
Dissolved Oxygen Concentrations
Tosco (Unocal) Service Station #6419
6401 Dublin Boulevard
Dublin, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
MW-7	08/24/01	--	2.70

EXPLANATIONS:

Dissolved oxygen concentrations were compiled from reports prepared by MPDS Services, Inc.

(mg/L) = Milligrams per liter

-- = Not Measured

N/A = Not Applicable

Table 4
Groundwater Analytical Data - Metals
 Tosco (Unocal) Service Station #6419
 6401 Dublin Boulevard
 Dublin, California

WELL ID	DATE	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)
MW-1	03/14/94	ND	0.012	ND	0.030	0.039
	08/25/94	ND	ND	0.024	ND	ND
	11/18/94	ND	0.076	ND	0.067	ND
	02/15/95	ND	ND	ND	ND	ND
	05/17/95	ND	ND	ND	0.021	ND

EXPLANATIONS:

Groundwater laboratory analytical results were compiled from reports prepared by MPDS Services, Inc.

(ppm) = Parts per million

ND = Not Detected

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # UNOCAL SS # 6419 (TOSIO)
Address: 6401 DUBLIN BLVD.
City: DUBLIN, CA

Job#: 180021
Date: 8-24-01
Sampler: STEVE BAUMAN

Well ID MW-1

Well Condition: O.K.

Well Diameter 2" in.

Hydrocarbon Thickness: ✓ in. Amount Bailed (product/water): ✓ (gal.)

Total Depth 9.23 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

Depth to Water 7.72 ft.

1.51 x VF 0.17 = 0.26 x 3 (case volume) = Estimated Purge Volume: 0.77 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 12:41

Weather Conditions: SUNNY

Sampling Time: 13:05

Water Color: NOT CLEAR Odor: ---

Purging Flow Rate: _____ gpm.

Sediment Description: _____

Did well de-water? NO

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal)	pH	Conductivity $\times 1000$ μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:44</u>	<u>0.25</u>	<u>6.88</u>	<u>1.70</u>	<u>73.3</u>	_____	_____	_____
<u>12:47</u>	<u>0.50</u>	<u>6.86</u>	<u>1.67</u>	<u>72.5</u>	_____	_____	_____
<u>12:51</u>	<u>0.75</u>	<u>6.85</u>	<u>6.63</u>	<u>72.3</u>	_____	_____	_____
_____	_____	_____	_____	_____	<u>3.1</u>	_____	<u>(AFTER PURGE)</u>

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>5 X VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQ.</u>	<u>TPHG/BTEX/MTOE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # UNOCAL SS # 6419 (TOSCO)
 Address: 6401 DUBLIN Blvd.
 City: DUBLIN, CA

Job#: 180021
 Date: 8-24-01
 Sampler: STEVE BAUMAN

Well ID: MW-2

Well Condition: O.K.

Well Diameter: 2" in.

Hydrocarbon Thickness: ∅ in. Amount Bailed (product/water): ∅ (gal.)

Total Depth: 17.60 ft.

Depth to Water: 7.57 ft.

Volume Factor (VF)	2" = 0.17	6" = 1.50	3" = 0.38	4" = 0.66	12" = 5.80
--------------------	-----------	-----------	-----------	-----------	------------

10.03 x VF 0.17 = 1.71 x 3 (case volume) = Estimated Purge Volume: 5.12 (gal.)

Purge Equipment:

Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment:

Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 10:52

Weather Conditions: SUNNY

Sampling Time: 11:10

Water Color: CLEAR Odor: _____

Purging Flow Rate: 1 gpm.

Sediment Description: _____

Did well de-water? NO

If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity ^{x1000} μ mhos/cm	Temperature ^{°F}	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:54</u>	<u>2</u>	<u>6.79</u>	<u>2.88</u>	<u>70.7</u>	_____	_____	_____
<u>10:56</u>	<u>4</u>	<u>6.78</u>	<u>2.90</u>	<u>69.7</u>	_____	_____	_____
<u>10:58</u>	<u>5.5</u>	<u>6.75</u>	<u>2.96</u>	<u>70.1</u>	_____	_____	_____
_____	_____	_____	_____	_____	<u>2.6</u>	<u>(AFTER PURGE)</u>	

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQ.</u>	<u>TPHG/BTEX/MTOE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # unocal ss # 6419 (Tosco)
Address: 6401 DUBLIN Blvd.
City: DUBLIN, CA

Job#: 180021
Date: 8-24-01
Sampler: STEVE BALIAN

Well ID MW-3 Well Condition: O.K

Well Diameter 2" in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 18.50 ft. Volume Factor (VF) $2" = 0.17$ $3" = 0.38$ $4" = 0.66$

Depth to Water 7.88 ft. $6" = 1.50$ $12" = 5.80$

10.62 x VF 0.17 = 1.81 x 3 (case volume) = Estimated Purge Volume: 5.42 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 11:48
Sampling Time: 12:05
Purging Flow Rate: 1 gpm.
Did well de-water? No

Weather Conditions: SUNNY
Water Color: CLEAR Odor: -
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>11:50</u>	<u>2</u>	<u>6.86</u>	<u>2.29</u>	<u>72.0</u>	_____	_____	_____
<u>11:52</u>	<u>4</u>	<u>6.84</u>	<u>2.26</u>	<u>72.2</u>	_____	_____	_____
<u>11:59</u>	<u>5.5</u>	<u>6.84</u>	<u>2.31</u>	<u>72.0</u>	_____	_____	_____
_____	_____	_____	_____	_____	<u>2.6</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 x VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQ.</u>	<u>TPHG/BTEX/MTOE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility # UNOCAL SS # 6419 (TOSCO) Job#: 180021
 Address: 6401 DUBLIN BLVD. Date: 8-24-01
 City: DUBLIN, CA Sampler: STEVE BAUER

Well ID: MW-4 Well Condition: O.K.
 Well Diameter: 2" in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)
 Total Depth: 19.15 ft. Volume Factor (VF):
 Depth to Water: 8.14 ft. 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

11.01 x VF 0.17 = 1.87 x 3 (case volume) = Estimated Purge Volume: 5.62 (gal.)

Purge Equipment: Disposable Bailer / Suction
 Sampling Equipment: Disposable Bailer / Bailer / Pressure Bailer / Grab Sample
 Other: _____

Starting Time: 12:13 Weather Conditions: SUNNY
 Sampling Time: 12:30 Water Color: CLEAR Odor: -
 Purging Flow Rate: 1 gpm. Sediment Description: _____
 Did well de-water? No If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity $\times 1000$ $\mu\text{hos/cm}$	Temperature $^{\circ}\text{F}$	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:15</u>	<u>2</u>	<u>6.82</u>	<u>2.22</u>	<u>71.1</u>			
<u>12:17</u>	<u>4</u>	<u>6.86</u>	<u>2.25</u>	<u>69.4</u>			
<u>12:19</u>	<u>6</u>	<u>6.89</u>	<u>2.20</u>	<u>69.5</u>			
					<u>2.3</u>		<u>(AFTER PURGE)</u>

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQ.</u>	<u>TPHG/BTEX/MTOE</u>

COMMENTS: REPLACE WELL CAP & LOCK

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # UNOCAL SS # 6419 (TOSIO)
Address: 6401 DUBLIN BLVD.
City: DUBLIN, CA

Job#: 180021
Date: 8-24-01
Sampler: STEVE BAUMAN

Well ID: MW-5 Well Condition: O.K.

Well Diameter: 2" in. Hydrocarbon Thickness: Ø in. Amount Bailed (product/water): Ø gal.
Total Depth: 19.40 ft.
Depth to Water: 7.60 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.80 x VF 0.17 = 2.01 x 3 (case volume) = Estimated Purge Volume: 6.02 gal.

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 10:26 Weather Conditions: SUNNY
Sampling Time: 10:45 Water Color: CLEAR Odor: -
Purging Flow Rate: 1 gpm. Sediment Description: _____
Did well de-water? NO If yes; Time: _____ Volume: _____ gal.

Time	Volume (gal.)	pH	Conductivity $\times 1000$ μ mhos/cm	Temperature $^{\circ}$ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>10:28</u>	<u>2.5</u>	<u>6.89</u>	<u>2.03</u>	<u>70.0</u>			
<u>10:30</u>	<u>4.5</u>	<u>6.86</u>	<u>2.12</u>	<u>71.6</u>			
<u>10:32</u>	<u>6.5</u>	<u>6.86</u>	<u>2.16</u>	<u>71.6</u>			
					<u>2.1</u>		<u>(AFTER PURGE)</u>

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-5</u>	<u>3x VOA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SER.</u>	<u>TPH/G/BTEX/MTOE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # UNOCAL SS # 6419 (TOSCO)
Address: 6401 DUBLIN BLVD.
City: DUBLIN, CA

Job#: 180021
Date: 8-24-01
Sampler: STEVE BAUMAN

Well ID: MW-6
Well Diameter: 2" in.
Total Depth: 19.35 ft.
Depth to Water: 7.84 ft.

Well Condition: O.K.
Hydrocarbon Thickness: in. Amount Bailed (product/water): (gal.)
Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
6" = 1.50 12" = 5.80

11.51 x VF 0.17 = 1.96 x 3 (case volume) = Estimated Purge Volume: 5.87 (gal.)

Purge Equipment: Disposable Bailer
Bailer
Stack
Suction
Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
Bailer
Pressure Bailer
Grab Sample
Other: _____

Starting Time: 11:19
Sampling Time: 11:40
Purging Flow Rate: 1 gpm.
Did well de-water? NO

Weather Conditions: SUNNY
Water Color: CLEAR Odor: _____
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	X1000 Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:21	2	6.76	2.55	71.2			
11:23	4	6.74	2.56	69.8			
11:25	6	6.69	2.48	69.2			
					2.7		(AFTER PURGE)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 X VDA VIAL	Y	HCL	SEQ.	TPHG/BTEX/MTOE

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/
Facility # UNOCAL SS # 6419 (TOSCO)
Address: 6401 DUBLIN BLVD.
City: DUBLIN, CA

Job#: 180021
Date: 8-24-01
Sampler: STEVE BAUMAN

Well ID: MW-7
Well Diameter: 2" in.
Total Depth: 19.35 ft.
Depth to Water: 7.72 ft.

Well Condition: O.K

Hydrocarbon Thickness: <u>✓</u> in.	Amount Bailed (product/water): <u>✓</u> (gal.)		
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.63 x VF 0.17 = 1.98 x 3 (case volume) = Estimated Purge Volume: 5.93 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
Other: _____

Starting Time: 9:54
Sampling Time: 10:15
Purging Flow Rate: 1 gpm.
Did well de-water? NO

Weather Conditions: SUNNY
Water Color: CLEAR Odor: _____
Sediment Description: _____
If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity <small>X1000 µmhos/cm</small>	Temperature <small>(°F)</small>	D.O. <small>(mg/L)</small>	ORP <small>(mV)</small>	Alkalinity <small>(ppm)</small>
<u>9:56</u>	<u>2</u>	<u>7.11</u>	<u>2.14</u>	<u>67.6</u>	_____	_____	_____
<u>9:58</u>	<u>4</u>	<u>7.06</u>	<u>2.11</u>	<u>68.0</u>	_____	_____	_____
<u>10:00</u>	<u>6</u>	<u>7.06</u>	<u>2.05</u>	<u>67.8</u>	_____	_____	_____
_____	_____	_____	_____	_____	<u>2.7</u>	_____	_____

(AFTER PURGE)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>3X VDA VIAL</u>	<u>Y</u>	<u>HCL</u>	<u>SEQ.</u>	<u>TPHG/BTEX/MTOE</u>

COMMENTS: _____



**Sequoia
Analytical**

RECEIVED

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673
www.sequoialabs.com

SEP 11 2001

GETTLER-RYAN INC.
GENERAL CONTRACTOR

10 September, 2001

Deanna L. Harding
Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin, CA 94568

RE: Unocal
Sequoia Report: W108457

Enclosed are the results of analyses for samples received by the laboratory on 24-Aug-01 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Charlie Westwater
Project Manager

CA ELAP Certificate #1271





Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin CA, 94568

Project: Unocal
Project Number: Unocal # 6419
Project Manager: Deanna L. Harding

Reported:
10-Sep-01 07:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	W108457-01	Water	24-Aug-01 00:00	24-Aug-01 16:00
MW-1	W108457-02	Water	24-Aug-01 13:05	24-Aug-01 16:00
MW-2	W108457-03	Water	24-Aug-01 11:10	24-Aug-01 16:00
MW-3	W108457-04	Water	24-Aug-01 12:05	24-Aug-01 16:00
MW-4	W108457-05	Water	24-Aug-01 12:30	24-Aug-01 16:00
MW-5	W108457-06	Water	24-Aug-01 10:45	24-Aug-01 16:00
MW-6	W108457-07	Water	24-Aug-01 11:40	24-Aug-01 16:00
MW-7	W108457-08	Water	24-Aug-01 10:15	24-Aug-01 16:00





Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin CA, 94568

Project: Unocal
Project Number: Unocal # 6419
Project Manager: Deanna L. Harding

Reported:
10-Sep-01 07:33

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (W108457-01) Water Sampled: 24-Aug-01 00:00 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	30-Aug-01	30-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		123 %	70-130		"	"	"	"	
MW-1 (W108457-02) Water Sampled: 24-Aug-01 13:05 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	30-Aug-01	30-Aug-01	EPA 8015M/8020	
Benzene	8.3	0.50	"	"	"	"	"	"	QR-04
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.7 %	70-130		"	"	"	"	
MW-1 (W108457-02RE1) Water Sampled: 24-Aug-01 13:05 Received: 24-Aug-01 16:00									
Methyl tert-butyl ether (MTBE)	10000	1200	ug/l	500	1H30001	04-Sep-01	04-Sep-01	EPA 8015M/8020	Q-28
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	70-130		"	"	"	"	
MW-2 (W108457-03) Water Sampled: 24-Aug-01 11:10 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	30-Aug-01	30-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	36	2.5	"	"	"	"	"	"	Q-28a
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.7 %	70-130		"	"	"	"	





Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
Dublin CA, 94568

Project: Unocal
Project Number: Unocal # 6419
Project Manager: Deanna L. Harding

Reported:
10-Sep-01 07:33

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W108457-04) Water Sampled: 24-Aug-01 12:05 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	30-Aug-01	30-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.7 %	70-130		"	"	"	"	
MW-3 (W108457-04RE1) Water Sampled: 24-Aug-01 12:05 Received: 24-Aug-01 16:00									
Methyl tert-butyl ether (MTBE)	2500	1000	ug/l	400	1H30001	06-Sep-01	06-Sep-01	EPA 8015M/8020	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.0 %	70-130		"	"	"	"	
MW-4 (W108457-05) Water Sampled: 24-Aug-01 12:30 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	30-Aug-01	30-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		116 %	70-130		"	"	"	"	
MW-4 (W108457-05RE1) Water Sampled: 24-Aug-01 12:30 Received: 24-Aug-01 16:00									
Methyl tert-butyl ether (MTBE)	7800	1200	ug/l	500	1H30001	31-Aug-01	31-Aug-01	EPA 8015M/8020	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		95.3 %	70-130		"	"	"	"	
MW-5 (W108457-06) Water Sampled: 24-Aug-01 10:45 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	31-Aug-01	31-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	18	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		116 %	70-130		"	"	"	"	





Gettler Ryan, Inc. - Dublin
6747 Sierra Court Suite J
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Project: Unocal
Project Number: Unocal # 6419
Project Manager: Deanna L. Harding

Reported:
10-Sep-01 07:33

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (W108457-07) Water Sampled: 24-Aug-01 11:40 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	200	ug/l	4	1H30001	31-Aug-01	31-Aug-01	EPA 8015M/8020	
Benzene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	1100	10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		108 %	70-130		"	"	"	"	
MW-7 (W108457-08) Water Sampled: 24-Aug-01 10:15 Received: 24-Aug-01 16:00									
Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l	1	1H30001	31-Aug-01	31-Aug-01	EPA 8015M/8020	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	4.4	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	70-130		"	"	"	"	





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Reported:
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Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W108457-02) Water Sampled: 24-Aug-01 13:05 Received: 24-Aug-01 16:00									
Ethanol	ND	25000	ug/l	50	1106001	07-Sep-01	07-Sep-01	EPA 8260B	
tert-Butyl alcohol	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether (MTBE)	6600	100	"	"	"	"	"	"	
Di-isopropyl ether	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	100	"	"	"	"	"	"	
tert-Amyl methyl ether	ND	100	"	"	"	"	"	"	
1,2-Dichloroethane	ND	100	"	"	"	"	"	"	
Ethylene dibromide	ND	100	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		104 %		50-150	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		100 %		50-150	"	"	"	"	





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Reported:
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1H30001 - EPA 5030B P/T

Blank (1H30001-BLK1)

Prepared & Analyzed: 30-Aug-01

Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether (MTBE)	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	37.7		"	30.0		126	70-130			

Blank (1H30001-BLK2)

Prepared & Analyzed: 31-Aug-01

Purgeable Hydrocarbons (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether (MTBE)	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	30.1		"	30.0		100	70-130			

LCS (1H30001-BS1)

Prepared & Analyzed: 30-Aug-01

Benzene	20.1	0.50	ug/l	20.0		100	70-130			
Toluene	20.3	0.50	"	20.0		102	70-130			
Ethylbenzene	20.4	0.50	"	20.0		102	70-130			
Xylenes (total)	56.1	0.50	"	60.0		93.5	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	27.5		"	30.0		91.7	70-130			

LCS (1H30001-BS2)

Prepared & Analyzed: 31-Aug-01

Benzene	18.8	0.50	ug/l	20.0		94.0	70-130			
Toluene	18.5	0.50	"	20.0		92.5	70-130			
Ethylbenzene	18.9	0.50	"	20.0		94.5	70-130			
Xylenes (total)	52.6	0.50	"	60.0		87.7	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	26.6		"	30.0		88.7	70-130			





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Reported:
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1H30001 - EPA 5030B P/T

Matrix Spike (1H30001-MS1)	Source: W108430-02			Prepared & Analyzed: 30-Aug-01						
Benzene	22.8	0.50	ug/l	20.0	ND	114	70-130			
Toluene	23.3	0.50	"	20.0	ND	116	70-130			
Ethylbenzene	23.4	0.50	"	20.0	ND	117	70-130			
Xylenes (total)	63.1	0.50	"	60.0	ND	105	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	33.9		"	30.0		113	70-130			

Matrix Spike Dup (1H30001-MSD1)	Source: W108430-02			Prepared & Analyzed: 30-Aug-01						
Benzene	22.2	0.50	ug/l	20.0	ND	111	70-130	2.67	20	
Toluene	22.1	0.50	"	20.0	ND	110	70-130	5.29	20	
Ethylbenzene	22.8	0.50	"	20.0	ND	114	70-130	2.60	20	
Xylenes (total)	61.4	0.50	"	60.0	ND	102	70-130	2.73	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	33.2		"	30.0		111	70-130			





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Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1106001 - EPA 5030B (P/T)

Blank (1106001-BLK1)

Prepared & Analyzed: 05-Sep-01

Ethanol	ND	500	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether (MTBE)	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
tert-Amyl methyl ether	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Ethylene dibromide	ND	2.0	"							
<i>Surrogate: Dibromofluoromethane</i>	49.6		"	50.0		99.2	50-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.1		"	50.0		88.2	50-150			

Blank (1106001-BLK2)

Prepared & Analyzed: 06-Sep-01

Ethanol	ND	500	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether (MTBE)	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
tert-Amyl methyl ether	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Ethylene dibromide	ND	2.0	"							
<i>Surrogate: Dibromofluoromethane</i>	51.6		"	50.0		103	50-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	44.8		"	50.0		89.6	50-150			

Blank (1106001-BLK3)

Prepared & Analyzed: 07-Sep-01

Ethanol	ND	500	ug/l							
tert-Butyl alcohol	ND	20	"							
Methyl tert-butyl ether (MTBE)	ND	2.0	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
tert-Amyl methyl ether	ND	2.0	"							
1,2-Dichloroethane	ND	2.0	"							
Ethylene dibromide	ND	2.0	"							
<i>Surrogate: Dibromofluoromethane</i>	25.7		"	25.0		103	50-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	25.4		"	25.0		102	50-150			





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Volatile Organic Compounds by EPA Method 8260B - Quality Control Sequoia Analytical - Walnut Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1106001 - EPA 5030B (P/T)										
LCS (1106001-BS1) Prepared & Analyzed: 05-Sep-01										
Methyl tert-butyl ether (MTBE)	54.1	2.0	ug/l	50.0		108	70-130			
Surrogate: Dibromofluoromethane	49.9		"	50.0		99.8	50-150			
Surrogate: 1,2-Dichloroethane-d4	44.9		"	50.0		89.8	50-150			
LCS (1106001-BS2) Prepared & Analyzed: 06-Sep-01										
Methyl tert-butyl ether (MTBE)	50.9	2.0	ug/l	50.0		102	70-130			
Surrogate: Dibromofluoromethane	50.4		"	50.0		101	50-150			
Surrogate: 1,2-Dichloroethane-d4	43.6		"	50.0		87.2	50-150			
LCS (1106001-BS3) Prepared & Analyzed: 07-Sep-01										
Methyl tert-butyl ether (MTBE)	21.8	2.0	ug/l	25.0		87.2	70-130			
Surrogate: Dibromofluoromethane	25.2		"	25.0		101	50-150			
Surrogate: 1,2-Dichloroethane-d4	24.1		"	25.0		96.4	50-150			
Matrix Spike (1106001-MS1) Source: W108507-02 Prepared: 05-Sep-01 Analyzed: 06-Sep-01										
Methyl tert-butyl ether (MTBE)	50.6	2.0	ug/l	50.0	ND	101	60-150			
Surrogate: Dibromofluoromethane	49.4		"	50.0		98.8	50-150			
Surrogate: 1,2-Dichloroethane-d4	45.0		"	50.0		90.0	50-150			
Matrix Spike Dup (1106001-MSD1) Source: W108507-02 Prepared: 05-Sep-01 Analyzed: 06-Sep-01										
Methyl tert-butyl ether (MTBE)	53.8	2.0	ug/l	50.0	ND	108	60-150	6.13	25	
Surrogate: Dibromofluoromethane	47.8		"	50.0		95.6	50-150			
Surrogate: 1,2-Dichloroethane-d4	43.0		"	50.0		86.0	50-150			





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Notes and Definitions

- Q-28 The opening calibration verification standard was outside acceptance criteria by 15%. Although the Laboratory Control Sample verified the accuracy of the batch, this should be considered in evaluating the data for its intended purpose.
- Q-28a The opening calibration verification standard was outside acceptance criteria by 6%. Although the Laboratory Control Sample verified the accuracy of the batch, this should be considered in evaluating the data for its intended purpose.
- QR-04 Primary and confirmation results varied by greater than 40% RPD. The results may still be useful for their intended purpose.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

